# Universitatea de Științele Vieții "Regele Mihai I" din Timișoara



### GRAPE CULTIVAR "BEGA"

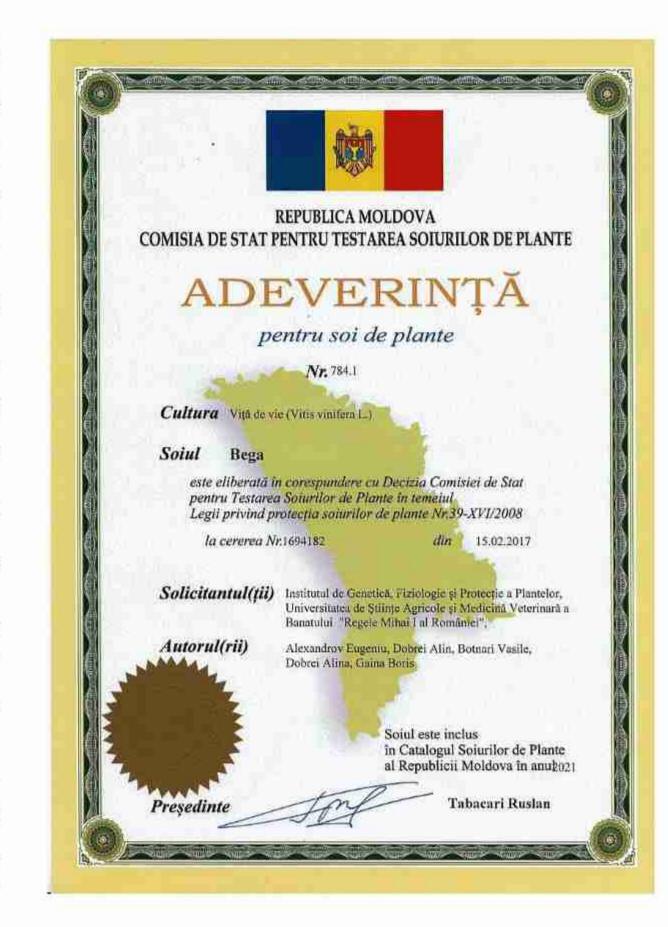


# ALEXANDROV EUGENIU, DOBREI ALIN, BOTNARI VASILE, DOBREI ALINA, GĂINĂ BORIS

Institute of Genetics, Physiology and Plant Genetics in Chisinau, Republic of Moldova, University of Life Sciences "King Mihai I" from Timișoara, Romania

The new genotype represents a grape cultivar developed for industrial processing, suitable for both wine and juice production.

Ampelographic description The mature leaves palmate-lobed and green in colour. The leaf blade has a profile, revolute with pronounced teeth along the leaf edges. The petiole sinus is wide open, a characteristic in aids cultivar that identification. The clusters are medium to large, cylindricalconical in shape, uniaxial, single-winged, and loosely structured, which allows for better aeration of the berries. Typically, there are clusters per shoot, ensuring



#### Ampelographic description

The clusters are resistant to handling and can transported and stored fresh without significant quality loss. The berries are medium-sized (averaging about 60 mg), elongated, evenly distributed within the cluster, and display an attractive blue-violet skin colour. The pulp is colourless, juicy, and firm, with a pleasantly neutral taste, and separates easily from the 1-2 slight despite seeds adherence to the skin.



consistent yields.





Ripening period: Medium, allowing flexibility in harvest timing.

Resistance: The cultivar is drought-tolerant and resistant to low winter temperatures.

Yield: Depending on cultivation practices, 'Bega' produces 5–7 kg per vine, equivalent to 14–16 tons per hectare.











conf. dr. L. Botos, conf.dr. I. Banatean Dunea, s.l.dr. A.

Interreg

IDA România - Serbia

Berbecea, s.l. dr. A. Lato, as.dr. L. Crista, s.l.dr. S. Batrina

Uniunea Europeană





FACULTATEA DE AGRICULTURA

## CROSS-BORDER AMBIENT AIR MONITORING NETWORK

Program priority: Environmental Protection and Risk Project ID:RORS00090 Management SPEFICIC OBJECTIVES: ESTABLISHMENT OF MONITORING **ENHANCING PROTECTION AND PRESERVATION OF** SYSTEMS AND RAISE AWARENESS OF AIR NATURE BIODIVERSITY AND GREEN INFRASTRUCTURE, POLLUTION **INCLUDING IN URBAN AREAS AND REDUCING ALL FORMS** OF POLLUTION  $NO/NO_2/NO_x/NH_3$ ,  $CO, O_3, SO_2/H_2S$ PM10, PM2.5 and PM1 volatile aromatic hydrocarbons - BTEX (benzene, toluene, ethylbenzene, xylen) Sources of Air Pollutants Two monitoring systems Real-time monitoring Hg, PAHs, Persistent Organic Polutants (POPs), including hexachlorobenzene (HCB), polychlorinated biphenyls (PCBs), dioxins and furans, and pesticides Laboratory determinations Beneficiaries: Outdoor air pollution affects urban and rural areas and is caused by multiple factor ☐ Local public authority Regional nd National public authority ☐ Sectoral agency ☐ Interest groups including NGOs ☐ Higher education and research organisations Microplastics and trace elements analysis laboratory ☐ Education/training center and school **□** Enterprise ☐ General public Director project: prof.dr. Florin Crista Echipa proiect: prof.dr. F. Imbrea. Prof.dr. I. Radulov, prof.dr. L Nita, prof.dr. I. Imbrea, prof.dr. L. Smuleac, conf.dr. I. Hotea,

# Universitatea de Științele Vieții "Regele Mihai I" din Timișoara





#### PHYTORESIL - NATURAL SUPPLEMENT WITH POLYPHENOLS AND **MICRONUTRIENT**

University of Life Sciences "King Mihai I" from Timisoara, 300645, Timisoara, Romania, Faculty of Food Engineering

Authors:

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Amaranthus retroflexus and Chenopodium album are plants traditionally used in food, valuable for their content of polyphenols and flavonoids with antioxidant and anti-inflammatory action. Their intake of minerals (Ca, Fe, Mg, Zn, K) and vitamins (C, E, beta-carotene) supports bone health, immunity, energy metabolism and cellular protection.

PhytoResil Premix is a standardized extract obtained from leaves and stems of Chenopodium album and Amaranthus retroflexus. It is presented in the form of a fine vegetable powder, with an olive-green hue and a slightly bitter taste, specific to vegetable raw materials. The product is concentrated in polyphenols and essential minerals, being designed as an active ingredient for food supplements and nutraceutical products. The extract is rich in bioactive compounds and essential minerals: total polyphenols ( $\geq$  80 mg GAE/g), potassium ( $\sim$ 10,465 mg/100 g), calcium (~4,784 mg/100 g), iron (~154 mg/100 g), zinc, manganese and copper. This combination supports electrolyte balance, energy metabolism, immune function and bone health, making it suitable as an ingredient for supplements and nutraceutical formulas.



One capsule contains 300 mg of PhytoResil Premix, a standardized extract rich in bioactive compounds and essential minerals. The product provides polyphenols as the main active component, recognized for their antioxidant action and their role in cell protection. The content of potassium, calcium, iron, zinc, manganese and copper contributes to maintaining electrolyte balance, supporting energy metabolism, immune function and bone health.



Suggested Use

Adults: Take 1 capsule twice daily with meals. For increased support (elderly, high oxidative stress, athletes), take up to 2 capsules twice daily. Do not exceed 2 g/day (≈ 6–7 capsules).

#### Warnings

- Not recommended for children under 12 years.
- Pregnant or lactating women: consult your
- healthcare provider before use. Not suitable for individuals with kidney
- disease (risk of hyperkalemia).
- Supplements should not replace a balanced diet and healthy lifestyle.

Figure 3. Premix Composition



Figure 1. Amaranthus retroflexus (Photos Mihaela Lăcătuș, 2025)

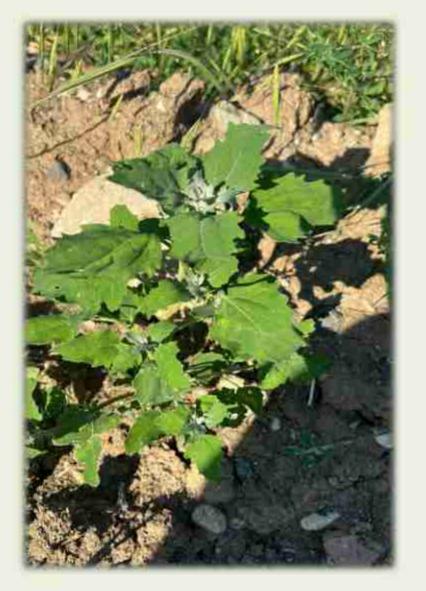


Figure 2. Chenopodium album (Photos Mihaela Lăcătuș, 2025)

#### **Product description:**

PhytoResil Premix is a fine plant-based powder obtained from leaves and stems of Chenopodium album and Amaranthus retroflexus. The product is standardized for its content of polyphenols and essential minerals, serving as a functional ingredient for dietary supplements and nutraceuticals.

- Appearance: fine, olive-green powder • Odor/Taste: characteristic vegetal, slightly bitter
- **Moisture**: < 8% · Solubility: partially soluble in water
- **pH** (1% solution): 5.0–6.5

#### Main composition (indicative values)

Indicative Premix Composition (mg/100 g), (calculated as weighted mean from table data)

- Total polyphenols: ≥ 80 mg GAE/g • K: 10465,4 mg
- · Ca: 4783,9 mg • Fe: 153,5 mg
- Zn: 10,6 mg
- Mn: 38,1 mg • Cu: 1,9 mg

#### Recommended applications

- Dietary supplements: 200–500 mg/capsule • Instant beverages / functional powders: 1–3 g/serving • Solid formulations (bars, snacks, bakery): 2-5% of formula
- Packaging and storage

#### • Packaging: multilayer pouches or bags, 5-25 kg

 Storage conditions: cool, dry, dark place, below 25°C • Shelf life: 24 months from production date

### **Key advantages**

- ✓ 100% natural, no synthetic additives
- ✓ Rich in polyphenols and essential minerals ✓ Suitable for nutraceutical and functional food applications

### ACKNOWLEDGEMENTS

Timisoara Romania.

This study was funded by the University of Life Sciences "King Mihai I" from Timisoara" and the results will be included in the PhD Thesis of Mihaela Lăcătuș, under the supervision of Prof.Habil.Dr.Eng. Despina-Maria Bordean Project: PhD Thesis, Doctoral Grant, IRVA Doctoral School, USVT, 2021–2025, Analysis of Bioactive Compounds from Plants and Their Application in the Development of Dietary Supplements". The research was performed with the support of the Interdisciplinary Research Platform belonging to the University of Life Sciences "King Mihai I" from









# INTESTINAL PARASITES IN WILD CARNIVORES FROM ROMANIA AND MOLECULAR IDENTIFICATION OF CESTODE SPECIES

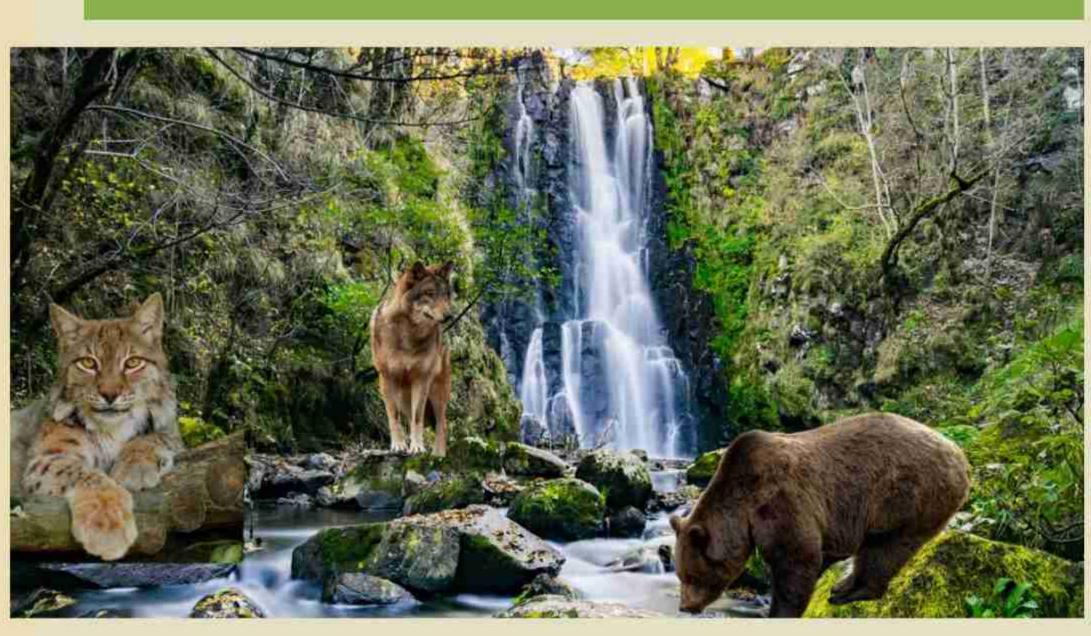
Maria Monica Florina Moraru, Ana-Maria Marin, Dan-Cornel Popovici, Azzurra Santoro, Sorin Morariu, Kalman Imre, Narcisa Mederle

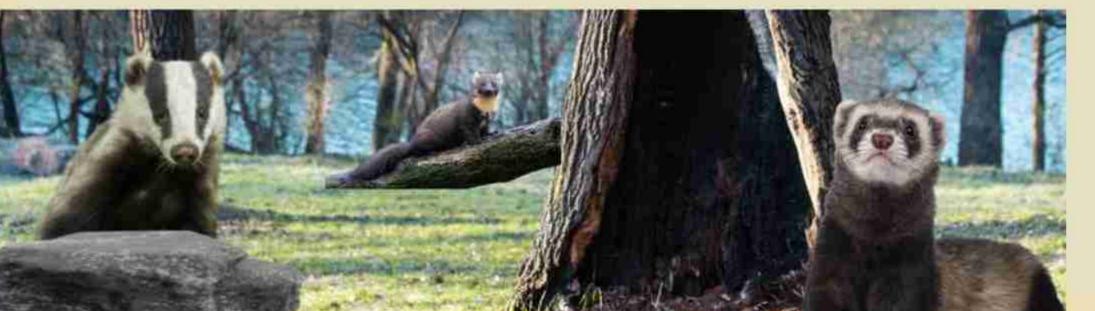
1Faculty of Veterinary Medicine, University of Life Sciences "King Mihai I" from Timisoara, 300645 Timisoara, Romania 2Forestry Faculty, Transilvania University Brasov, Sirul Beethoven, 500123 Brasov, Romania 3Department of Infectious Diseases, Istituto Superiore di Sanità, Viale Regina Elena 299, 00161 Rome, Italy

Wild carnivores are key hosts in the transmission maintenance of numerous zoonotic parasites. In Romania, parasitological data regarding these species remain limited, for helminths with zoonotic particularly potential.

This doctoral research project, conducted under the supervision of **Prof. Narcisa** Mederle, aimed to perform a comprehensive investigation of the parasitic load in wild mammals from Romania.

A total of 441 wild mammals, representing 11 host species—including the brown bear (Ursus arctos), grey wolf (Canis lupus), Eurasian lynx (Lynx lynx), Golden jackal (Canis aureus), Red fox (Vulpes vulpes), raccoon dog (Nyctereutes procyonoides), European wildcat (Felis silvestris), European badger (Meles meles), European polecat (Mustela putorius), Pine marten (Martes martes), Stone marten (Martes foina)—were examined across 28 counties in Romania.





# Cestodes were detected in 7 host species:

- Brown bear (*Ursus arctos*) 1/115
- Grey wolf (Canis lupus) 5/10 Eurasian lynx (Lynx lynx) – 1/1
- Golden jackal (Canis aureus) 29/83
- Red fox (Vulpes vulpes) 72/161
- European wildcat (Felis silvestris)-
- 22/27 European badger (Meles meles) – 7/22)

With the highest prevalence recorded in

the: Red fox (Vulpes vulpes) - 44,71 %

Notably, two cestode species were reported for the first time in Romania: Taenia arctos in the brown bear and Mesocestoides melesi in the badger.

These findings highlight the diversity and epidemiological importance of cestodes in wild carnivores and underscore the role of wildlife as reservoirs for parasites with zoonotic potential. The data contribute to the understanding of parasite-host relationships in Romanian ecosystems and emphasize the need for ongoing surveillance at the wildlifedomestic animal-human interface.

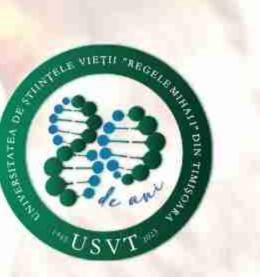


Acknowledgements: This research was conducted within the framework of the PhD thesis of Maria Monica Florina Moraru at the University of Life Sciences "King Mihai I" from Timișoara, Faculty of Veterinary Medicine, under the supervision of Professor Narcisa Mederle.

# Universitatea de Științele Vieții "Regele Mihai I" din Timișoara







Assessment of the nutritional and biofunctional profile of Sibiu salami, verification of the stability of biofunctional compounds during the shelf life and demonstration of the nutritional benefits of the product for the human body

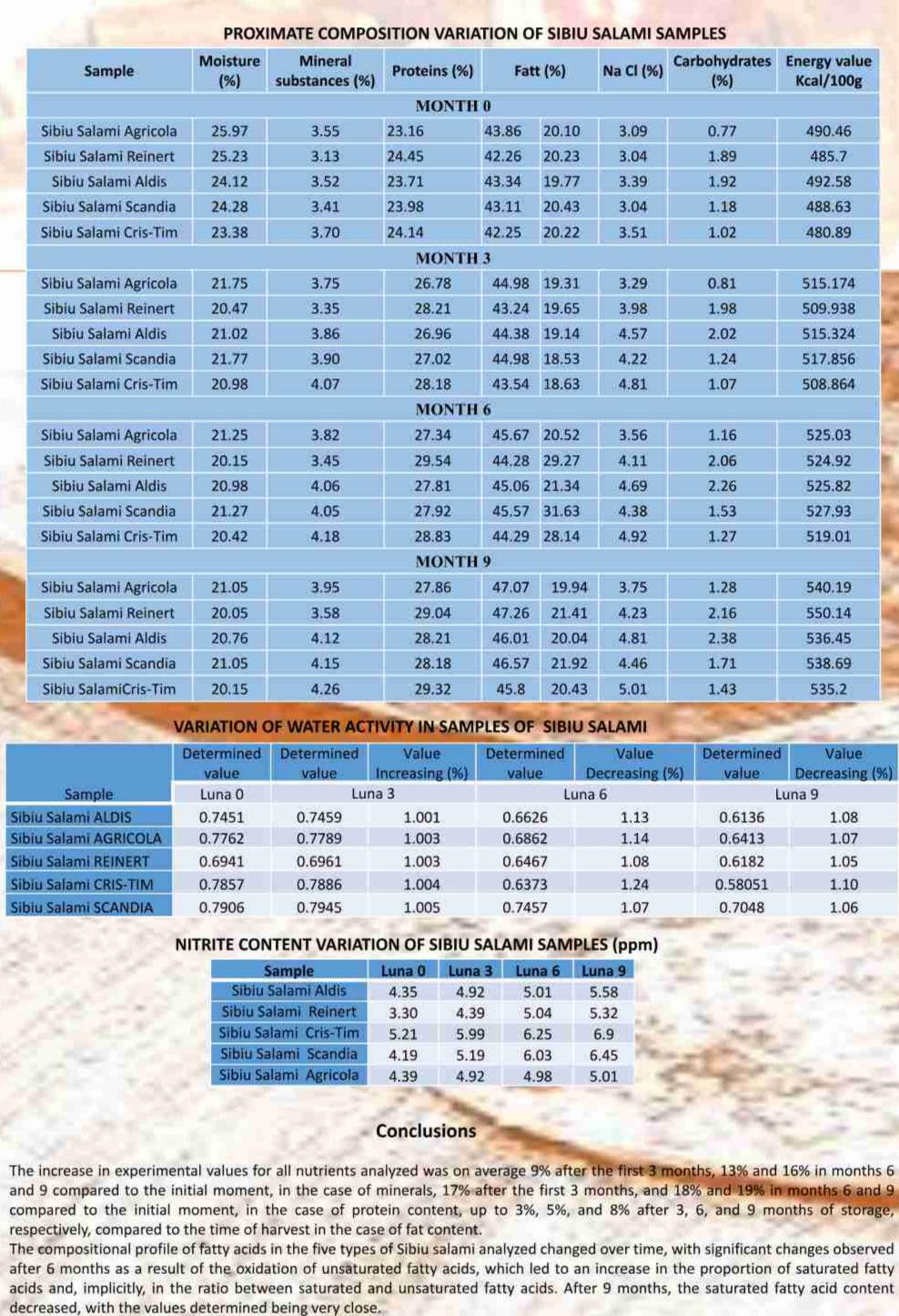
Research project: No. 8611/11.10.2024

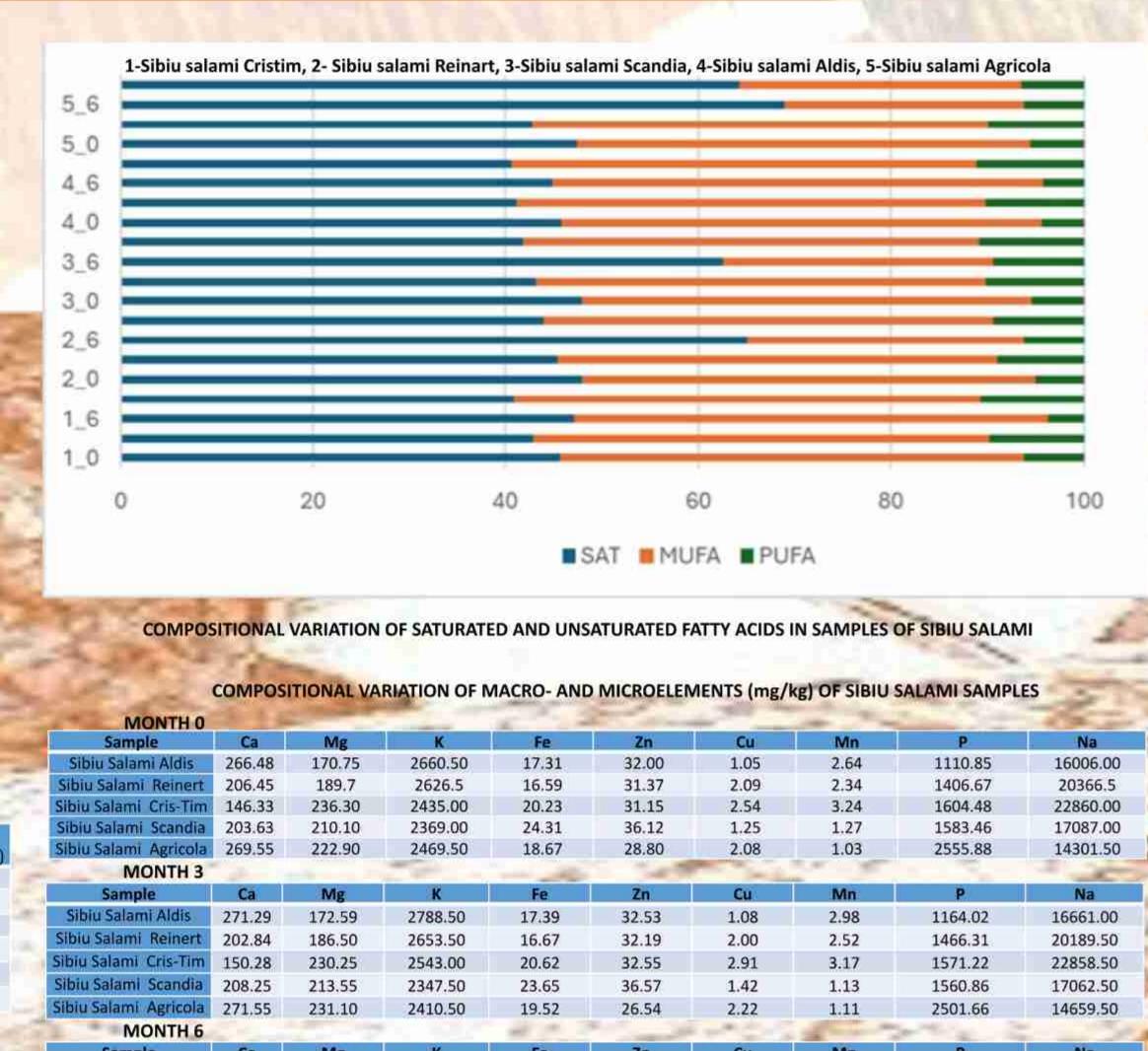
#### **Authors:**

<sup>1</sup>Diana Nicoleta Raba, <sup>1</sup> Delia Gabriela Dumbravă, <sup>1</sup> Camelia Moldovan, <sup>1</sup> Ileana Cocan, <sup>1</sup> Isidora Radulov, <sup>1</sup> Adina Berbecea, <sup>1</sup> Popescu Iulina

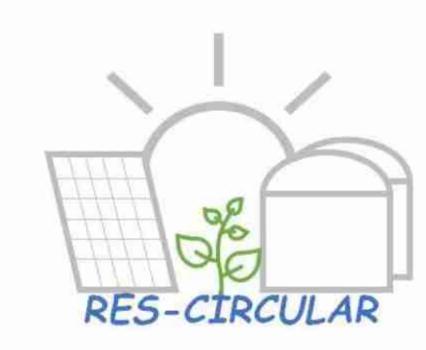
> 1-University of Life Sciences "King Mihai I" from Timisoara \*corresponding author, e-mail: diana.raba@usvt.ro

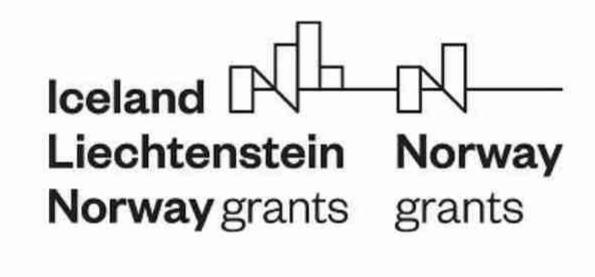
The project focuses on studying Sibiu salami, a well-known Romanian meat product, to better understand its nutritional value and health benefits. The proximate composition (moistures, proteins, fats, carbohydrates, ash and salt), water activity and nitrite content of the five Sibiu salami's provided by five Romanian producers were analyzed. Also, total fatty acids composition, with an emphasis on omega-3 and omega-6 fatty acids and mineral content were evaluated to assess the nutritional value of the salami samples. The study will also check how stable these compounds are during the product's shelf life, making sure they remain effective over time. In addition, the project aims to show how eating Sibiu salami can contribute to a balanced diet and support the human body's functions. By combining food analysis with nutritional science, the research will help promote Sibiu salami not just as a traditional food, but also as a product with real health value. This could support both consumer awareness and the development of better-quality meat products in the future.





2.93 1600.50 22172.00 16453.50 1.21 2621.00 15041.50 1272.50 16687.50 1318.00 21324.50 1.93 1513.50 22770.00 3024.00 34103.00 2708.00 15639.50 The mineral profile of the Sibiu salami samples showed the highest increase after the first 3 months of storage and slight increases after 6 and 9 months Overall, Scandia and Agricola Sibiu salamis showed the highest micro and macroelement content of all the samples analyzed. The nitrite content of all five samples of Sibiu salami, as well as their water activity, was below the maximum permitted value in all periods analyzed. The experimental results obtained confirm the stability during the shelf life of all physicochemical parameters and compounds analyzed and reveal how eating Sibiu salami can contribute to a balanced diet and support the human body's functions.







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1405.00

# Renewable Energy Sources and Circular Economy Applied in an Academic Community as an Example for Smart Sustainable Development

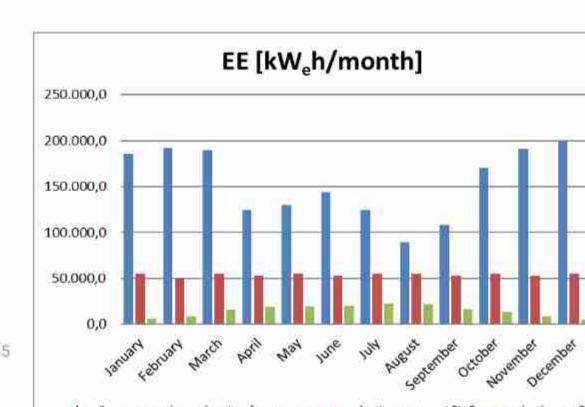
Project number: 2020/554215

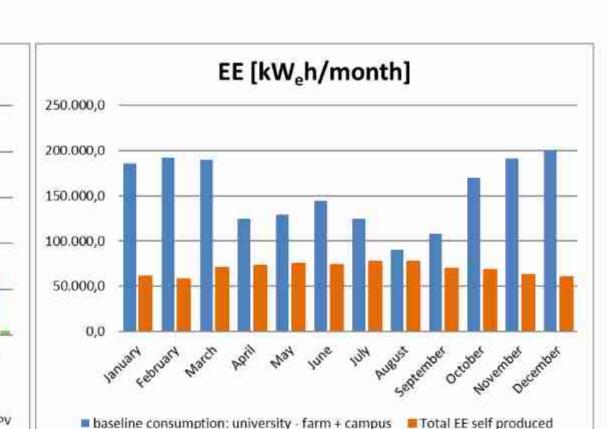
Project team: Teodor Vintilă, Cosmin Alin Popescu, Adina Horablaga, Isidora Radulov, Acatincăi Stelian, Marco Di Stanislao

# Description

The energy system consists of a photovoltaic plant of 150 kWe and a biogas plant containing a CHP unit of 100 kWe installed capacity. The total electricity production capacity of the system is predicted at approx. 825 MWh/year, which can cover up to 50% of the total electricity consumption of the USV Regele Mihai I campus in Timișoara. Total savings of CO2 equivalent are evaluated at 2400 tons / year. State of development: Project, energy system in function

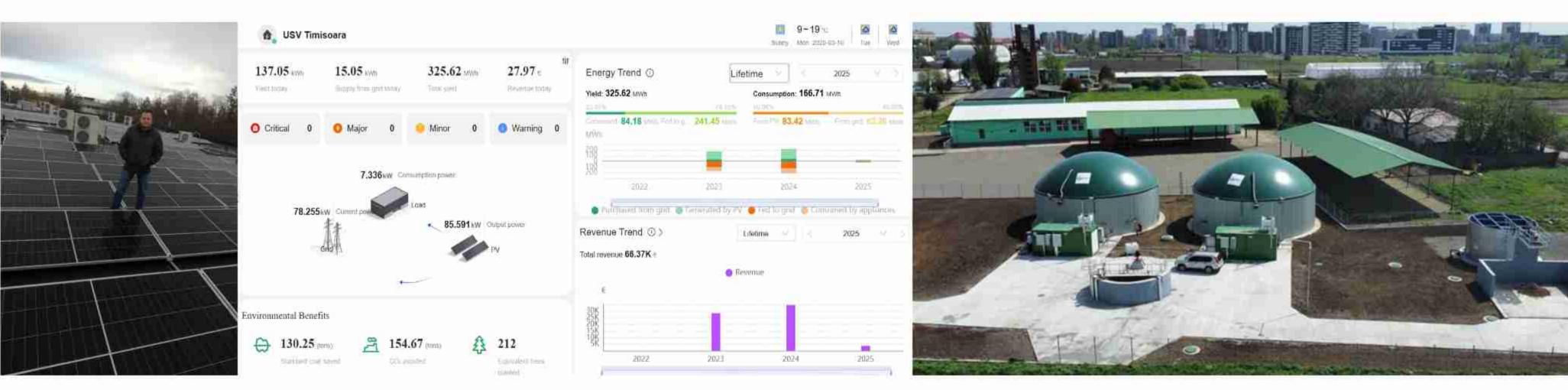






University campus will save up to 50% of electric energy from fossil fuel and 10% of thermal energy from fossil fuel

The time for renewable energy and circular bioeconomy has arrived. Replication of RES-CIRCULAR project powered by Norway through the Norway Grants, will help to achieve energy security in România and in Europe and to reduce negative impact of human activity on the climate and environment



University can connect renewable energy technologies with a large number fields: agriculture, animal sector, forestry, horticulture, rural development, circular economy, food industry, clean environment. Transfer of knowledge through training of tomorrow's generation

Total budget: 1,122,514 Euro, of which 954,000 Euro are offered as a grant by Norway through EEA and Norwegian Financial Mechanisms. The rest of the total eligible expenses are foreseen in the budget of USV Timișoara. Project period: December 2020 - April 2025 Contact & info: Dr. Teodor Vintila, Department of Biotechnology, +40256277086, tvintila@animalsci-tm.ro, www.biocombustibil-tm.ro Project Supported by Norway through the Norway Grants, EEA and Norwegian Financial Mechanisms 2014-2021, Programme area "Renewable Energy, Energy Efficiency, Energy Security" in Romania